1. Cathy Freeman won the 400m sprint at the 2000 games, Jai Terema came second in the long jump at the same game
2. What energy system would be used predominantly in each event?
3. 400m
4. Long jump
5. Would you expect Freeman and Terema to use the same recovery strategy? Explain with reference to energy systems.
6. What physiological evidence would there be of Freeman’s involvement in the 400m half an hour after the conclusion of the event?
7. What food fuel would Freeman and Terema use during the recovery phase?
8. A. state two factors that distinguish *anaerobic* glycolysis and *aerobic* glycolysis.

B. what does the term glycolysis

C. indicate the specific sites where anaerobic and aerobic glycolysis occur

D. What type of glycolysis will be occurring when there is insufficient oxygen available in the body

E. what by-product will be formed as a result of the glycolysis you identified in part d

3. Which of the following is most important to a 1500m runner

* Full glycolysis stores
* High VO2 max
* High anaerobic threshold
* Low aerobic threshold

Justify your answer

4. Complete the table

|  |  |  |
| --- | --- | --- |
| Fuel | Duration | Intensity (L,M,H) |
| ATP-PC |  |  |
| Glycogen |  |  |
| Glycogen / Fats |  |  |

5. a. Explain why the ATP –PC system is able to supply the majority of energy for activities of short duration and high intensity

b. Explain why the aerobic system is able to supply energy for activities of long duration and medium intensity

7. Which energy system is predominantly being utilised by a cross-country skier in a 15 km race:

a. while waiting at the start

b. in the first 100m

c. between 100m and 1000m

d. from 100m to 14500m

e. as he sprints the last 500m